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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/188,399	11/06/1998	MARK BODDY	256.029US1	4315

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HONEYWELL INTERNATIONAL INC.  
101 COLUMBIA ROAD  
P O BOX 2245  
MORRISTOWN, NJ 07962-2245

EXAMINER

GARLAND, STEVEN R

ART UNIT	PAPER NUMBER
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2125

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DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/188,399

Applicant(s)

BODDY ET AL.

Examiner

Steven R Garland

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19, 27-29 and 32-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-19, 27-29 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-3,5-8,10,11,13-19, and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by the Goldman et al. article " A Constraint-Based-Scheduler for Batch Manufacturing" ( copy supplied by applicant ) .

Goldman et al. teaches constraint based scheduling using discrete and continuous constraints, determining infeasible schedules, breaking tasks into activities and subactivities, use of deadlines, identifying required resources, dynamic backtracking, schedule modification, use of solver engines, etc. See pages 49-56 and note figures 1 and 2.

In response to applicant's arguments about Goldman et al., note page 49, columns 1-3; page 50, columns 1-2; page 51, columns 1-2; page 52, columns 1-3; page 53, columns 1-3; page 54, columns 2-3; page 55, columns 1-2; and figures 1,2, A, and B. Further in regards to applicant's arguments about resizing, scheduling, and constraints, Goldman teaches resizing and use of constraints in figure A, and pages 52-55. As to scheduling note page 49, column 1 for example. In regards to applicant's arguments about continuous and discrete constraints, page 7, line 22 provides a

definition but not the only one, for example page 1, lines 10-20; page 10, lines 26-27; page 13, lines 19-20 also provide guidance and examples in regards to meaning of constraints. Further the claims do not require that a continuous constraint define a linear mathematical relationship with other variables as applicant appears to argue.

A clear copy of Goldman is being furnished since the copy provided by applicant is difficult to read in various portions.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over by the Goldman et al. article "A Constraint-Based-Scheduler for Batch Manufacturing" (copy supplied by applicant).

Goldman et al. teaches everything except specifically storing the software on a medium.

It would have been obvious to one of ordinary skill in the art to modify Goldman to store the software on a medium as a backup copy in case the system crashes and also allow for easily loading the software on system startup.

In response to applicant's arguments about Goldman et al., note page 49, columns 1-3; page 50, columns 1-2; page 51, columns 1-2; page 52, columns 1-3; page 53, columns 1-3; page 54, columns 2-3; page 55, columns 1-2; and figures 1,2, A, and B. Further in regards to applicant's arguments about resizing, scheduling, and constraints, Goldman teaches resizing and use of constraints in figure A, and pages 52-55. As to scheduling note page 49, column 1 for example. In regards to applicant's arguments about continuous and discrete constraints, page 7, line 22 provides a definition but not the only one, for example page 1, lines 10-20; page 10, lines 26-27; page 13, lines 19-20 also provide guidance and examples in regards to meaning of constraints. Further the claims do not require that a continuous constraint define a linear mathematical relationship with other variables as applicant appears to argue.

Further in response to applicant's arguments about the "Official Notice ", O'Connor 5,894,571 discloses the notoriously well known expedient of providing a backup copy and using the backup copy to install the software. See the abstract and col. 2, lines 23-33.

6. Claims 1-11, 14,15,19,27-29,33, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Zweben et al. 6,216,109.

Zweben et al. teaches constraint based scheduling using continuous and discrete constraints, use of a memory to store the software, use of deadlines and start and end times, splitting tasks into subtasks, identifying required resources to perform a task, resource balancing, identifying infeasibilities, schedule modification, etc. See the abstract, figures, col. 1, lines 39-65; col. 2, lines 1-6; col. 9, lines 30-47; col. 14, lines 6-42; col. 15, line 33 to col. 16, line 61; col. 25, line 45 to col. 26, line 58; and the claims.

In response to applicant's arguments, Zweben clearly teaches splitting tasks into smaller tasks subject to constraints, see column 16, lines 52-67, for example.

In regards to applicant's arguments about continuous and discrete constraints, page 7, line 22 provides a definition but not the only one, for example page 1, lines 10-20; page 10, lines 26-27; page 13, lines 19-20 also provide guidance and examples in regards to meaning of constraints. Further the claims do not require that a continuous constraint define a linear mathematical relationship with other variables as applicant appears to argue.

7. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

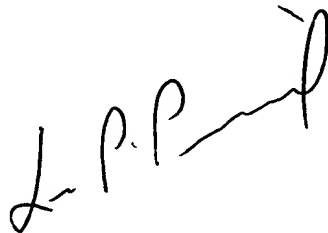
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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R Garland whose telephone number is 703-305-9759. The examiner can normally be reached on Monday –Thursday from 6:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239; for after final faxes 703-308-7238; and for non official faxes 703-746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3900.



SRG

Steven R Garland  
Examiner  
Art Unit 2125

**LEO PICARD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**